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The Maryland Fruit Grower

March, 1933

Maryland State
Horticultural Society

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Maryland ◈ Fruit ◈ Grower

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AS OTHERS SEE IT

We reprint part of an Agricultural Outlook which appeared in Virginia "Extension Division News", February, 1933.

Apples

U. S. Production in 1932.—The total apple crop in the United States for 1932 is placed at 138,976,000 bushels as compared with 202,385,000 bushels in 1931 and a commercial crop of 85,155,000 bushels or 28,385,000 barrels, for 1932 as against 34,592,000 barrels in 1931.

Most of this decrease took place in the barrel sections of the east and was due to a combination of factors such as severe March freeze; dry weather during growing season; weakened trees because of heavy bearing during 1931, and lack of funds on the part of some growers to properly care for these trees.

Because of the prevalence of scab, codling moth, small apples due to drought conditions, and poor spraying, the quality of the crop was not up to the good standard of some previous years. Some varieties also failed to color up properly because of dry weather.

Demand and Prices.—The low price of apples has encouraged domestic buying on the part of the low income groups in the southern apple market territory.

On the supply side many growers who were unable to lay out capital for grading, packing and packages have been able, through the trucker, to market their ungraded fruit with little outlay and a fair return. While the farm price of apples has been lower than for a number of years, the price in relation to other farm prices has been favorable from the standpoint of the grower. Prices started out rather low, but as stocks have been cleaned up, there has been considerable improvement.

During the 1931-1932 season the total exports of apples from the United States amounted to 18,032,000 bushels. Of this amount, 2,855,000 were barrels, which amount is 10.2 per cent greater than the average shipments of 2,605,000 barrels in the previous five seasons and 3.3 per cent greater than the 2,764,000 barrels shipped in the big crop season of 1930-1931. This increase of barrel exports was made in the face of English embargoes. Export prices were lower for the 1931-1932 season than for the season of 1930-1931, due to depressed business conditions and the drop in exchange.

Outlook for Future.—Apple supplies from the short crop in the United

Kingdom and most of the other countries of Continental Europe are moving into consumpation rapidly. Storm injured fruit in Canada has put into immediate consumption a large per cent of the Canadian crop. This, together with a lightening up on restrictions by France, Argentina and other export countries, and the fact that the demand from Germany and Holland is showing an increase, indicates that there will be a considerable increase in export demand for the export stocks that are on hand. If the condition and quality of apple exports continue to improve, the price for the balance of the year should show some improvement as the season advances.

Prospects are for a larger apple crop in the United States in 1933. In the light of increased apple production in 1933 and the competition that the apple will encounter from other fruits, and with the trade becoming more discriminating, it is going to be highly important that growers but on the market a more dependable pack of superior quality and less of the low grade fruit. High yields of good colored fruit are important. Thorough spraying to meet the sanitary restrictions of the export markets is essential. Since growers cannot expect an increase in prices, it is important that each grower reduce his production costs wherever possible. Further improvement should be made in handling the fruit.

Peaches

Prices.—While prices in southern shipping points for 1932 were higher than the low prices received by the growers for the large crop of 1931, they were not as high as would be indicated by the relation between production and price during previous seasons. Unsatisfactory demand conditions and lower prices generally were responsible factors. Another important reason for the low prices of this year was the competition that southern peaches encountered in the large markets from California shipments. Competition from this source may be expected in future years when the crop in the southern states is small.

In 1925 there were 89,000,000 peach trees in the United States. In 1930 there were about 79,000,000; a decline of 10,000,000 trees in this five-year period. In the southern peach states the decline has been even more rapid, especially during the last two years. Most of the peach trees in the south have reached the age of their greatest production. The average life of a commercial peach orchard in the south is about fourteen years. Many trees are in poor condition because growers have not been able to realize enough money from the low prices of the last few years to take care of their trees properly. There are very few young trees in southern peach states, not sufficient to maintain the present number of bearing trees. The trend in production is downward. It is not expected that production will fall sharply but that it will be slow and gradual. Even the present number of trees under favorable conditions are capable of producing a large commercial crop of peaches. In fact, the very short crop in 1932 has given the trees a rest and has put them in a condition to set a good crop in 1933, if weather conditions are favorable.

Future Plantings.—From the long time point of view, moderate plantings sufficient to maintain the present commercial orchards seem advisable. Sites that will not produce annual crops and soils that will not produce high yields should not be planted to peach trees. Heavy plantings at one time should be avoided in order to avoid over-production. Georgia and other states that compete with Virginia growers in the markets are planting a large number of

peach trees of the early varieties. It is not advisable to plant the extremely early varieties except for local markets, as they must compete with the better varieties from the earlier producing states. Varieties maturing later than Elberta should also be avoided because of the carry-over of oriental moth, which is heavy with the late varieties. For the same reason it is not advisable to interplant apples with peaches.

Strawberries

It is estimated that the commercial strawberry growers in the United States will pick 202,300 acres in 1933. This is 4.5 per cent more than the 193,650 acres picked in 1932; 31 per cent more than the 154,190 acres picked in 1931, and only about 2 per cent less than the record acreage of 1928.

Most of the increases are in the second early group of states, which includes Virginia, and the intermediate states, which move a large part of their crop to market during Virginia's harvesting season. Virginia had 5,520 acres in 1931; 6,350 acres in 1932 and 7,000 acres are intended for 1933.

Yields and Prices.—For the United States as a whole the yield per acre in 1932 exceeded that of any other year since 1926, with one exception. Prices to growers in 1932, because of poor quality of the berries due to weather conditions and low buying power of consumers, were lower than they had been for many years.

With an increase in acreage in sight for 1933, and barring adverse weather conditions, it can be reasonably expected that the 1933 harvest will be equal to or larger than the 1932 crop. It is, therefore recommended that growers concentrate on securing higher yields per acre and improving the quality of the crop rather than increase their expenditures by expanding the acreage.

* * *

AIR-COOLED STORAGE

With a note of caution, the following article, by C. L. Burkholder of Purdue Agricultural Experiment Station is given. Air-cooled or "common" storage has not worked 100% in Maryland, but some growers, with smaller production and local or nearby market outlets are well pleased with their storages. The weak points of the common storage are high temperature in the fall, slow change of temperature, proper ventilation and moisture. Ventilation and moisture can be taken care of, however, if the grower will give these points proper attention. However, since many growers feel unable to meet cold storage charges and are unable to install cold storage at the orchard, this article may be of interest. It is well to remember, however, that ripening and decay are likely to cause losses to a certain extent, in the common storage in some parts of Maryland. The article follows:

"Many apple growers have built or are contemplating the construction of a cool air storage in the near future. There are many types of these storages in use and one of the most interesting ones of recent date is at the Brown Fruit Farm, Worthington, Ohio.

In the first place this storage is holding fruit in a very satisfactory condition. In the second place the construction cost was much lower than most cool air storages of equal capacity. The building will hold 12,000 bushels.

Two large double doors in each end make it possible to drive in and out with wagons and trucks. These large openings are also left open at night when a rapid change of air is needed. To prevent rats and mice from entering the storage through these doors a tin gate 3 feet high fits in each door. (Maryland growers are using hardware screen doors, beside the outside doors.) On the east end of the building and close to the peak of the roof is a large 8′ x 6′ hinged door which can be opened by a rope and pulley from the storage floor. This serves to drain out the hot air from the top of the storage room and saves more expensive forms of ventilators in the roof. In addition to these provisions for movement of air there are five 4′ x 4′ openings along the base of the storage walls which can be easily opened or closed as required. This, including doorways, provides in the neighborhood of 288 square feet of openings which provide for the very best utilization of cool night air during the fall season. Most Indiana storages now in use do not have nearly enough provision for rapid air movement.

Insulation—Insulation is another important and costly item of cool air construction. This particular storage is of wood covered with stucco. Three layers of celotex type of insulation have been used under the roof and two layers on the walls. No covering has been given the insulating material on the inside of the storage. The floor is dirt.

Humidity—Mr. Brown has had nearly twenty years of experience in handling cool air storages. Practically all of his fruit is stored in slatted lug boxes to a height of eleven crates. As soon as the fruit in the storage needs more moisture he hooks on a hose to connections provided for the purpose inside the storage, and gives the ricks of crates a heavy sprinkling over both tops and sides. Enough water is applied to run down through the entire depth of the ricks. Mr. Brown has never found that this treatment has increased storage disease problems or decayed his storage crates. On the other hand, his apples always retain the fresh, snappy texture of newly picked fruit.

Cost—This particular storage has been built for several years but at that time cost $3,600, or 30 cents a bushel on a basis of 12,000 bushels. This is 15 to 20 cents a bushel less than many other cool air storages in the central west.

Moving Apples Out of Storage—A roller conveyor extends the entire length of one side of the storage. The conveyor passes out a small door at the end of the storage and across into the packing room where the boxes are delivered either to the mouth of the apple sizer or to the cider press. The $3,600 mentioned above includes the cost of this conveyor system which has paid for itself many times in speeding up and reducing handling charges."

* * *

SPRAY CALENDARS

Its almost time to wind up the old spray rig and blow fog all over everything. The 1933 Spray Calendars have been mailed out by the Maryland Extension Service. Did you get your copy? If so, look it over carefully. If not, write the Extension Service, College Park, for your copy.

MOUSE CONTROL

Again from Indiana, we find some information about mouse bait, that is of interest. Mr. C. G. Oderkirk, offers the following observations in February, 1933, "Hoosier Horticulture":

"We have had several complaints regarding the effect of prepared oats bait upon rats and house mice. When rats and house mice gnaw into bags of the bait and feed upon it apparently without affecting them, it would seem to indicate that the bait is not effective against other species of mice. Incidents of this kind were reported three years ago. At first we thought the bait did not receive the proper dosage of strychnine but a careful check showed that the bait was properly treated. Observations were made of rats, house mice and species of field mice, feeding upon the bait, revealing the fact that rats and house mice carefully remove the outer hulls of the oats without receiving a lethal dose of strychnine whereas field mice hull the grain roughly, consuming a sufficient amount of strychnine to cause death.

"Following the first complaints, we attempted to remove this objectionable feature by increasing the dosage of strychnine. The first shipments were treated in the proportion of 1 ounce of strychnine to 20 quarts of oats. The present strength of the prepared bait is 1 ounce of strychnine to 12 quarts of bait. A stronger dosage of strychnine than 1 to 12 is considered inadvisable as it would likely decrease the acceptance of the bait by field mice.

"In view of the fact that bait is obtained primarily for field mice, it would be desirable to store it in a place where the bags will not be gnawed into by rats and house mice.

"The infestation of field mice generally appears to be much greater than last year. It is advisable to check up quite carefully and bait them now particularly in small areas in the orchard where they seem to be very numerous. It has been my observation that much damage by mice is caused early in the spring at a time when their natural supply of succulent food in the orchard is at a low point. Careful baiting of infested areas in the orchard at that time will prevent considerable injury."

There is considerable activity of mice, this year, and every grower should examine his trees *now,* for mouse injury. Drop about a teaspoonful of bait in several burrows around the tree, and the results should be not so good for the mice. Don't neglect mouse injury. This causes weak trees, and such trees call for the axe. If there is any question about where to obtain bait, write A. F. Vierheller, Extension Service, College Park, Maryland, and information will be furnished.

TRUCK COSTS

Farm trucks, of which there are more than 40,000 in Illinois, are operated at an average cost of $188 a year, or 6.7 cents a mile, for the 1 and 1½ ton sizes, according to detailed cost studies by Illinois College of Agriculture.

Mileage on the trucks that were studied averaged 2,813 miles a year, and the average load hauled was 2,825 pounds, giving a cost of 9 cents a ton mile, says P. E. Johnston of the farm management department. In travelling the 2,813 miles, the trucks consumed an average of 253 gallons of gasoline, which was at the rate of 11.1 miles a gallon. The average gas bill for the season was $35.74 or 19 per cent of the total operating cost.

THE DORMANT SPRAY

Dr. W. S. Hough of Winchester (Virginia) Field Station writing for "Virginia Fruit", February, 1933, reports in part:—"The loose bark on the trunk and limbs protect many live scale insects beneath the loose strips of bark. Dormant sprays are much more effective against scale if all trees are thoroughly scraped and the loose bark removed before spraying begins.

It is also of great importance to scrape the loose bark from the trees wherever codling moth injury has been a problem.

The importance of spraying for scale insects cannot be stressed too strongly. Lime sulphur (32 degrees Baume) 12 gallons in 100 gallons is satisfactory against San Jose scale but is not very effective against apple aphids. For control of both scale and aphids the most economical spray consists of oil emulsion diluted in the tank to contain not less than 3% oil, and cresylic acid at the rate of one-half gallon per 100 gallons of spray. While the agitator is running pour in the cresylic acid after the oil emulsion has been diluted in the spray tank. No attempt is made to emulsify the cresylic acid. Running the agitator keeps the cresylic acid mixed sufficiently for spraying.

When cresylic acid is used with oil emulsion the spray should be completed by the time the first leaves are one-fourth inch long. Oil emulsion alone or lime sulphur can be used until the first leaves are from one-half to three-fourths of an inch long. Either pale or dark grade cresylic acid can be used with oil emulsion, but spraying should begin before the buds show green so that ample time will be available to complete the application before the buds develop too far, that is, before the first leaves exceed one-fourth inch in length.

It is not advisable to use any commercial oil spray which is said to contain cresylic acid, unless the manufacturer prints on the label the per cent of cresylic acid in the stock emulsion. Commercial oil emulsions containing cresylic acid should contain oil and cresylic acid in such proportions that, when diluted at the rate recommended on the label, there will be in the diluted spray a minimum of 3% oil and ½% cresylic acid.

Cresylic acid is intended for aphis control only. It is compatible with all oil emulsions known to the writer and with Bordeaux mixture, but not with lime sulphur."

* * *

THE OUTLOOK

"The Maryland Agricultural Situation and Outlook 1933" is ready for distribution. Those desiring a copy, should write to University of Maryland Extension Service, College Park. It is easy to read and contains helpful hints on agricultural problems.

* * *

WHAT'S THIS?

"It says in the paper that a baby fed on elephant's milk gained twenty pounds in two weeks."

"I don't believe it. Whose baby was it?"

"The elephant's."

GROWING COSTS

As a rule, figures from other sections of the country, do not mean much to us, but they are of great value in showing us the general ratio of costs. Missouri Circular 225 gives much real information on growing costs of young apple trees. The figures were completed in 1928, covering 10,557 trees. The figures show use of land, and interest as heavy items, and carry the trees only through 8 years. The returns from intercrops were 14½ cents per tree per year. On the basis of the figures given, an acre of trees set 36′ x 36′ would cost $152.13 for 8 years of growth, and trees set 40′ x 40′ would cost $124.47. These are not Maryland figures, nor are they 1933 figures, but they are interesting, anyway.

ITEMIZED COST OF GROWING A TREE BY YEARS

Itemized Cost of Growing A Tree by Years

	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.	6th Yr.	7th Yr.	8th Yr.	Total	Per Cent of Total Cost
Use of land @ 6%	.176c	.296c	.319c	.311c	.328c	.322c	.295c	.332c	$2.37	41.1
Setting trees	.062c	.....	.....	.....	.002c	.001c	.001c	.....	.07	1.1
Nursery stock	.255c	.001c	.006c	.....	.014c	.007c	.008c	.002c	.29	5.1
Wrapping trees	.031c	.004c	.....	.004c	.....	.005c	.....	.003c	.05	.8
Cultivation	.042c	.008c	.....	.106c	.202c	.128c	.004c	.137c	.67	11.5
Spraying	.....	.006c	.004c	.006c	.064c	.038c	.105c	.219c	.44	7.6
Pruning	.....	.006c	.010c	.008c	.049c	.002c	.036c	.079c	.19	3.3
Orchard supplies	.003c	.001c	.....	.004c	.024c	.037c	.026c	.021c	.12	2.1
Use of equipment	.012c	.006c	.016c	.029c	.084c	.025c	.034c	.061c	.27	4.6
Miscellaneous	.....	.002c	.....	.004c	.011c	.....	.017c	.023c	.06	1.0
Interest	.035c	.057c	.081c	.115c	.168c	.212c	.289c	.327c	1.25	21.8
Total Cost	.616c	.387c	.436c	.587c	.946c	.777c	.825c	1.204c	5.78	100.0
Total Net Returns	.....	.....	.....	.....	.....	.....	.....	.....	1.17	20.2
Net Cost	.....	.....	.....	.....	.....	.....	.....	.....	4.61	79.8

THE EXPORT PROBLEM

On January 18, the Export Committee of the Maryland State Horticultural Society, appeared before Senator Millard Tydings and Representative David Lewis and presented the case of the apple industry as regards the export situation. No program was suggested, but a plan was made for assistance in obtaining a more free flow of world trade that would, in its operation benefit the apple grower and exporter. The committee was cordially received, and the Congressmen promised to assist in any possible way toward better international trade and understanding.

GRAFTING

Home making of grafting wax, proper grafts, cion wood, etc., are all discussed in Maryland Bulletin, No. 278, "Budding and Grafting of Fruit Trees." If interested, write the Maryland Agricultural Experiment Station, College Park, for your free copy.

RECENT MEETINGS

During the month of February, two-day short courses were held in the Horticultural Building, College Park, for Florists, February 7 and 8; Canners' and Field Men's School, February 14 and 15; and Nurserymen, February 20 and 21. Each of the sessions was well attended and excellent discussions were heard. Demonstrations, and exhibits were held in connection with the various meetings.

A THOUGHT

We don't get more out of a thing than we put into it. Do you get any value out of "The Maryland Fruit Grower"? Do you have any interest in the Society? Do you want to receive the 1933 Proceedings of the Society? 1933 membership was due January 1. Send your dollar to A. F. Vierheller, College Park, Maryland. We need 200 more members. Will you help?

Hopkins: "I hear you have invented a new machine. What is it?"
Inventor: "It's a revolving nest. When a hen lays an egg, the nest revolves and the egg falls into a receptacle underneath. Then the hen turns around, and, seeing no egg, thinks she has made a mistake, and promptly lays another."

A new bulletin, "Effect of Fall Applications of Sodium Nitrate Upon the Color, Keeping Quality and Nitrogen Content of Apples," was recently prepared by W. W. Aldrich, of the University of Maryland. Write for Bulletin No. 326.

Dog Catcher:—"Do those dogs have licenses?"
Scared Boy:—"Yes sir, they're just full of 'im."

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is now used in MARYLAND ORCHARDS

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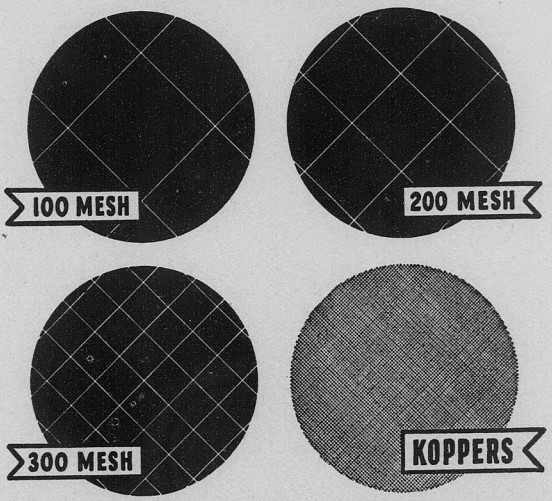

Koppers Flotation Sulphur is much easier on spray rig and equipment and lessens the danger of clogged lines and nozzles, because much less solids are pumped through. It eliminates delay in mixing in spray tank . . . no matter how fast the tank fills! Immediately wettable . . . you can dump a 10-lb. bag directly into tank and forget about it! The small amount of material leaves no spray residue to blotch fruit. Koppers Flotation Sulphur practically removes danger of arsenical injury when used with zinc-bordeaux-lead arsenate mixture. Especially popular with men handling the gun because of its non-caustic properties and its ease of handling. Compare its wettability and suspension qualities with other wettable sulphurs. Priced right!

SPRAY WITH KOPPERS FLOTATION SULPHUR

NONE GENUINE WITHOUT THIS TRADEMARK
KOPPERS
FLOTATION SULPHUR

Fifteen times finer than 300-mesh

In addition to Flotation Sulphur we also manufacture Tar Oil Dormant Spray; Agricultural Weed Killers; Non-Caking Sulphate of Ammonia; Coal Tar Disinfectants; Wood Preservers; Cattle Sprays and Poultry House Sprays.

Write for full information and prices

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Here is a new economy spray!

A LATE
Delayed Dormant Spray
SCALECIDE 1-50 and SULFOCIDE 1-150

Many Maryland apple orchards have little need for a scale spray, but must control scab, red mite, aphis and other soft bodied insects. The late delayed dormant spray fills the bill. It is not a recommendation to cut cost and effectiveness through weakened dilutions, but a definite spray with a purpose. It replaces two sprays—the delayed dormant and the prepink. It retains all the value of the safest oil spray as well as sulphur protection against scab. It is the only successful combination of an oil and sulphur that can be used at this most effective time.

Scalecide 1 to 50 - Sulfocide 1 to 150

Controls red mite, aphis, scab, at lowest cost.

Start spraying when the first green tips begin to show and complete before the blossom buds begin to separate. If buds advance too fast into the pink stage, cut the Scalecide to 1 to 100 and continue spraying.

Let us send you complete description and spray program.

B. G. PRATT COMPANY

50 Church Street **Dept. F** **New York**